POSTER DESCRIPTION SHEET

Title: Incorporating System Properties into Multi-Attribute Tradespace Exploration with Concurrent Design

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Summary Description: The expected contributions of this research include: concrete quantification of flexibility, robustness, adaptability, and scalability in a value-centric tradespace exploration framework (MATE), insight into how unarticulated value may be assessed in addition to formal articulated value, a useful and expanded process/framework for Conceptual Design trade studies through the explicit consideration of psychological and cognitive abilities of humans, and suggestions for future work.

Key Points:

1) Tradespace exploration paradigm allows holistic system understanding, and enables designers to cope with dynamic uncertainty
2) Ilities, like flexibility, may arise as tradespace emergent phenomenon
3) Incorporation of ilities adds unarticulated value as decision criteria for determining "best" system designs

Linkage with Research: PhD associated with Systems Architecting, Product Design, Lifecycle Sustainability, Emerging Systems Engineering Methodologies